

In the Claims

Claims 1-78 (Canceled).

Claim 79 (previously presented): An isolated and purified polypeptide comprising a contiguous span of at least 10 amino acids shown as positions 1 to 1629 of SEQ ID NO:5.

Claim 80 (currently amended): An isolated and purified polypeptide comprising:

- a) a contiguous span of at least 6-8 contiguous amino acids of SEQ ID NO:5, wherein said contiguous amino acids span comprises ~~an~~ the asparagine at an amino acid position corresponding to position 1694 of SEQ ID NO:5;
- b) a contiguous span of at least 6 contiguous amino acids of SEQ ID NO:5, wherein said contiguous amino acids span comprises ~~an~~ the valine at an amino acid position corresponding to position 1854 of SEQ ID NO:5;
- c) a contiguous span of at least 6 contiguous amino acids of SEQ ID NO:5, wherein said contiguous amino acids span comprises ~~an~~ the asparagine at an amino acid position corresponding to position 1967 of SEQ ID NO:5;
- d) a contiguous span of at least 6 contiguous amino acids of SEQ ID NO:5, wherein said contiguous amino acids span comprises ~~an~~ the glutamic acid at an amino acid position corresponding to position 2017 of SEQ ID NO:5; or
- e) a contiguous span of at least 40 contiguous amino acids of SEQ ID NO: 5 , wherein said contiguous amino acids span comprises ~~an~~ the glutamic acid at an amino acid position corresponding to position 2017 of SEQ ID NO:5 and ~~an~~ the alanine at an amino acid position corresponding to position 2050 of SEQ ID NO: 5.

Claim 81 (currently amended): The polypeptide of claim 80, wherein said contiguous amino acids span the asparagine at amino acid position 1694 of SEQ ID NO:5 ~~said contiguous span comprises an asparagine at an amino acid position corresponding to position 1694 of SEQ ID NO:5~~.

Claim 82 (currently amended): The polypeptide of claim 80, wherein said contiguous amino acids span the valine at amino acid position 1854 of SEQ ID NO:5 ~~wherein said contiguous span comprises a valine at an amino acid position corresponding to position 1854 of SEQ ID NO:5~~.

Claim 83 (currently amended): The polypeptide of claim 80, wherein said contiguous amino acids span the asparagine at amino acid position 1967 of SEQ ID NO:5 ~~wherein said contiguous span comprises an asparagine at an amino acid position corresponding to position 1967 of SEQ ID NO:5~~.

Claim 84 (currently amended): The polypeptide of claim 80, wherein said contiguous amino acids span the glutamic acid at amino acid position 2017 of SEQ ID NO:5 ~~wherein said contiguous span comprises a glutamic acid at an amino acid position corresponding to position 2017 of SEQ ID NO:5~~.

Claim 85 (currently amended): The polypeptide of claim 80, wherein said contiguous amino acids span the glutamic acid at amino acid position 2017 of SEQ ID NO:5 and the alanine at amino acid position 2050 of SEQ ID NO:5 ~~wherein said contiguous span comprises a glutamic acid at an amino acid position corresponding to position 2017 of SEQ ID NO:5 and an alanine at an amino acid position corresponding to position 2050 of SEQ ID NO:5 and is at least 40 amino acids in length~~.

Claim 86 (currently amended): A composition comprising an isolated and purified polypeptide, wherein said polypeptide has an amino acid sequence comprising:

- a) at least 10 contiguous amino acids of SEQ ID NO:5 spanning position(s) 1 to 200;
- b) at least 10 contiguous amino acids of SEQ ID NO:5 spanning position(s) 201 to 400;

- c) at least 10 contiguous amino acids of SEQ ID NO:5 spanning position(s) 401 to 600;
- d) at least 10 contiguous amino acids of SEQ ID NO:5 spanning position(s) 601 to 800;
- e) at least 10 contiguous amino acids of SEQ ID NO:5 spanning position(s) 801 to 1000;
- f) at least 10 contiguous amino acids of SEQ ID NO:5 spanning position(s) 1001 to 1200;
- g) at least 10 contiguous amino acids of SEQ ID NO:5 spanning position(s) 1201 to 1400;
- h) at least 10 contiguous amino acids of SEQ ID NO:5 spanning position(s) 1401 to 1629;
- i) at least 10 contiguous amino acids of SEQ ID NO:5 spanning position(s) 1694, wherein said contiguous amino acids span the asparagine at amino acid position 1694 of SEQ ID NO:5 wherein the amino acid at position 1694 of SEQ ID NO:5 is an asparagine;
- j) at least 10 contiguous amino acids of SEQ ID NO:5 spanning position(s) 1854, wherein said contiguous amino acids span the valine at amino acid position 1854 of SEQ ID NO:5 wherein the amino acid at position 1854 of SEQ ID NO:5 is a valine;
- k) at least 10 contiguous amino acids of SEQ ID NO:5 spanning position(s) 1967, wherein said contiguous amino acids span the asparagine at amino acid position 1967 of SEQ ID NO:5 wherein the amino acid at position 1967 of SEQ ID NO:5 is an asparagine;
- l) at least 10 contiguous amino acids of SEQ ID NO:5 spanning position(s) 2017, wherein said contiguous amino acids span the glutamic acid at amino

acid position 2017 of SEQ ID NO:5 wherein the amino acid at position 2017 of SEQ ID NO:5 is a glutamic acid; and

m) a contiguous span of at least 40 contiguous amino acids of SEQ ID NO:5 spanning position 2050, wherein said contiguous amino acids span the glutamic acid at amino acid position 2017 of SEQ ID NO:5 and the alanine at amino acid position 2050 of SEQ ID NO:5 wherein said span comprises a glutamic acid at an amino acid position corresponding to position 2017 of SEQ ID NO:5 and the amino acid at position 2050 of SEQ ID NO:5 is an alanine.

Claim 87 (previously presented): The composition of claim 86, wherein said position(s) are 1 to 200.

Claim 88 (previously presented): The composition of claim 86, wherein said position(s) are 201 to 400.

Claim 89 (previously presented): The composition of claim 86, wherein said position(s) are 401 to 600.

Claim 90 (previously presented): The composition of claim 86, wherein said position(s) are 601 to 800.

Claim 91 (previously presented): The composition of claim 86, wherein said position(s) are 801 to 1000.

Claim 92 (previously presented): The composition of claim 86, wherein said position(s) are 1001 to 1200.

Claim 93 (previously presented): The composition of claim 86, wherein said position(s) are 1201 to 1400.

Claim 94 (previously presented): The composition of claim 86, wherein said position(s) are 1401 to 1629.

Claim 95 (currently amended): The composition of claim 86, wherein said contiguous amino acids span the asparagine at amino acid position 1694 of SEQ ID NO:5 position(s) is 1694.

Claim 96 (currently amended): The composition of claim 86, wherein said contiguous amino acids span the valine at amino acid position 1854 of SEQ ID NO:5 position(s) is 1854.

Claim 97 (currently amended): The composition of claim 86, wherein said contiguous amino acids span the asparagine at amino acid position 1967 of SEQ ID NO:5 position(s) is 1967.

Claim 98 (currently amended): The composition of claim 86, wherein said contiguous amino acids span the glutamic acid at amino acid position 2017 of SEQ ID NO:5 position(s) is 2017.

Claim 99 (currently amended): The composition of claim 86, wherein said contiguous amino acids span the glutamic acid at amino acid position 2017 of SEQ ID NO:5 and the alanine at amino acid position 2050 of SEQ ID NO:5 position(s) is 2050 and said span is at least 40 amino acids in length and comprises a glutamic acid at an amino acid position corresponding to position 2017 of SEQ ID NO:5 and an alanine corresponding to position 2050 of SEQ ID NO:5.

Claim 100 (previously presented): The composition of claim 86a), 86b), 86c), 86d), 86e), 86f), 86g), 86h), 86i), 86j), 86k), or 86l), wherein said polypeptide is at least 20 amino acids in length.

**Claim 101 (previously presented):** The composition of claim 86, wherein said polypeptide is at least 50 amino acids in length.

**Claim 102 (previously presented):** The composition of claim 86, wherein said polypeptide is at least 100 amino acids in length.

**Claim 103 (previously presented):** The polypeptide of claim 79, wherein said polypeptide is recombinant.

**Claim 104 (previously presented):** The polypeptide of claim 86, wherein said polypeptide is recombinant.

**Claim 105 (previously presented):** The composition of claim 86, further comprising a physiologically acceptable carrier.

**Claim 106 (previously presented):** A method of making the polypeptide of claim 79 comprising the steps of:

- a) obtaining a cell that expresses said polypeptide;
- b) growing said cell under conditions suitable to produce said polypeptide; and
- c) isolating and purifying said polypeptide produced by said cell.

**Claim 107 (previously presented):** The method of claim 106, wherein said cell is prokaryotic.

**Claim 108 (previously presented):** The method of claim 106, wherein said cell is eukaryotic.

**Claim 109 (previously presented):** A method of making the polypeptide of claim 86 comprising the steps of:

- a) obtaining a cell that expresses said polypeptide;

b) growing said cell under conditions suitable to produce said polypeptide; and isolating and purifying said polypeptide produced by said cell.

Claim 110 (previously presented): The method of claim 109, wherein said cell is prokaryotic.

Claim 111 (previously presented): The method of claim 109, wherein said cell is eukaryotic.

Claim 112 (currently amended): An isolated or purified antibody that selectively binds to an epitope-containing fragment of the polypeptide of claim 79, wherein said epitope-containing fragment comprises at least six or eight consecutive amino acids ~~one amino acid corresponding to an amino acid shown at position~~ position 1 to 1629 of SEQ ID NO:5.

Claim 113 (currently amended): The antibody of claim 112, wherein said epitope comprises ~~at least one amino acid corresponding to an amino acid shown at position~~ the amino acids shown at positions ~~1 to 200~~ of SEQ ID NO:5.

Claim 114 (currently amended): The antibody of claim 112, wherein said epitope comprises the amino acids ~~at least one amino acid corresponding to an amino acid shown at positions~~ position 201 to 400 of SEQ ID NO:5.

Claim 115 (currently amended): The antibody of claim 112, wherein said epitope comprises the amino acids ~~at least one amino acid corresponding to an amino acid shown at positions~~ position 401 to 600 of SEQ ID NO:5.

Claim 116 (currently amended): The antibody of claim 112, wherein said epitope comprises the amino acids ~~at least one amino acid corresponding to an amino acid shown at position~~ positions 601 to 800 of SEQ ID NO:5.

Claim 117 (currently amended): The antibody of claim 112, wherein said epitope comprises the amino acids at least one amino acid corresponding to an amino acid shown at positions position 801 to 1000 of SEQ ID NO:5.

Claim 118 (currently amended): The antibody of claim 112, wherein said epitope comprises the amino acids at least one amino acid corresponding to an amino acid shown at positions position 1001 to 1200 of SEQ ID NO:5.

Claim 119 (currently amended): The antibody of claim 112, wherein said epitope comprises the amino acids at least one amino acid corresponding to an amino acid shown at positions position 1201 to 1400 of SEQ ID NO:5.

Claim 120 (currently amended): The antibody of claim 112, wherein said epitope comprises the amino acids at least one amino acid corresponding to an amino acid shown at positions position 1401 to 1629 of SEQ ID NO:5.

Claim 121 (currently amended): An isolated or purified antibody that selectively binds to an epitope-containing fragment of the polypeptide of claim 80, wherein said epitope comprises an amino acid selected from the group consisting of:

- a) at least 8 contiguous amino acids of SEQ ID NO:5 that span the asparagine at amino acid position 1694 of SEQ ID NO:5 ~~an asparagine at an amino acid position corresponding to position 1694 of SEQ ID NO:5;~~
- b) at least 6 contiguous amino acids of SEQ ID NO:5 that span the valine at amino acid position 1854 of SEQ ID NO:5 ~~a valine at an amino acid position corresponding to position 1854 of SEQ ID NO:5;~~
- c) at least 6 contiguous amino acids of SEQ ID NO:5 that span the asparagine at amino acid position 1967 of SEQ ID NO:5 ~~an asparagine at an amino acid position corresponding to position 1967 of SEQ ID NO:5;~~

- d) at least 6 contiguous amino acids of SEQ ID NO:5 that span the glutamic acid at amino acid position 2017 of SEQ ID NO:5; a glutamic acid at an amino acid position corresponding to position 2017 of SEQ ID NO:5; or and
- e) at least 40 contiguous amino acids of SEQ ID NO: 5 that span the glutamic acid at amino acid position 2017 of SEQ ID NO:5 and the alanine at amino acid position 2050 of SEQ ID NO: 5; a glutamic acid at an amino acid position corresponding to position 2017 of SEQ ID NO:5 and an alanine at an amino acid position corresponding to position 2050 of SEQ ID NO:5.

Claim 122 (currently amended): The antibody of claim 121, wherein said epitope comprises at least 8 contiguous amino acids of SEQ ID NO:5 that span the asparagine at amino acid position 1694 of SEQ ID NO:5; an asparagine at an amino acid position corresponding to position 1694 of SEQ ID NO:5.

Claim 123 (currently amended): The antibody of claim 121, wherein said epitope comprises at least 6 contiguous amino acids of SEQ ID NO:5 that span the valine at amino acid position 1854 of SEQ ID NO:5; a valine at an amino acid position corresponding to position 1854 of SEQ ID NO:5.

Claim 124 (currently amended): The antibody of claim 121, wherein said epitope comprises an at least 6 contiguous amino acids of SEQ ID NO:5 that span the asparagine at amino acid position 1967 of SEQ ID NO:5; an asparagine at an amino acid position corresponding to position 1967 of SEQ ID NO:5.

Claim 125 (currently amended): The antibody of claim 121, wherein said epitope comprises at least 6 contiguous amino acids of SEQ ID NO:5 that span the glutamic acid at amino acid position 2017 of SEQ ID NO:5; a glutamic acid at an amino acid position corresponding to position 2017 of SEQ ID NO:5.

Claim 126 (currently amended): The antibody of claim 121, wherein said epitope comprises at least 40 contiguous amino acids of SEQ ID NO: 5 that span the glutamic acid at amino acid position 2017 of SEQ ID NO:5 and the alanine at amino acid position 2050 of SEQ ID NO: 5a glutamic acid at an amino acid position corresponding to position 2017 of SEQ ID NO:5 and an alanine at an amino acid position corresponding to position 2050 of SEQ ID NO:5.

Claim 127 (previously presented): The isolated and purified polypeptide according to claim 80, wherein said polypeptide comprises a contiguous span of at least 10 amino acids.

Claim 128 (previously presented): The polypeptide according to claim 79, wherein said polypeptide comprises SEQ ID NO:5.

Claim 129 (previously presented): The polypeptide according to claim 80, wherein said polypeptide comprises SEQ ID NO:5.

Claim 130 (previously presented): The composition according to claim 86, wherein said polypeptide comprises SEQ ID NO:5.

Claim 131 (previously presented): The method according to claim 106, wherein said polypeptide comprises SEQ ID NO:5.

Claim 132 (previously presented): The method according to claim 109, wherein said polypeptide comprises SEQ ID NO:5.